

## ABSTRACT

An arbitration system and process is provided to arbitrate usage of a shared resource. The system and process dynamically adjust to changing workloads and includes artificial intelligence to learn from experience how to optimize system throughput. In system form, the present invention provides a resource arbitration system that includes an arbitration controller adapted to monitor a resource used by a plurality of agents and adapted to calculate an optimal usage of said resource for each agent. The controller also generates grant control signals to each agent to couple agents to the resource based on the calculated optimal usage for each agent.

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